

Roadmap: Cap-and-Invest carbon management policy development

Background

Washington's law set greenhouse gas reduction limits to help our state achieve net zero emissions by 2050 and reduce the state's contribution to the pollution causing the harmful impacts of climate change. In 2026, the state published the Comprehensive Climate Action Plan (CCAP), providing a roadmap for the state as it works toward meeting its climate goals. Both carbon capture, utilization, and storage for hard to decarbonize sectors (Strategy D.4) and carbon dioxide removal (Strategy F.5) were identified in the CCAP as critical strategies.

These technologies and practices fall under the umbrella term, carbon management, and can help prevent carbon dioxide from being released into the atmosphere, displace the use of fossil-based carbon in products, and/or remove carbon dioxide emissions from the atmosphere after release. While not a replacement for other emissions reduction measures, carbon management is a tool for reducing greenhouse gas emissions where other pathways are not available. It is also a tool for helping to remove historical carbon dioxide emissions and closing gaps in Washington's emissions reduction mandates.

Carbon management can be used by businesses subject to the Cap-and-Invest Program as a part of their decarbonization and program compliance strategy. Businesses can exempt some of their covered emissions from program coverage through permanent sequestration[1] or by purchasing offset credits[2] that are generated by carbon management projects.

Ecology has ongoing efforts dedicated to developing, reviewing, and updating offset protocols, including protocols for carbon dioxide and greenhouse gas removals. To date, four offset protocols have been adopted and one additional offset type is under exploration. In 2025, Ecology published the Carbon Dioxide Removal Evaluation Study, which may help inform priorities for future offset protocol development.

Carbon management is a rapidly evolving subject area and there are several areas where Ecology needs to provide additional clarity on how it fits within the Cap-and-Invest Program. **This roadmap**

[1] WAC 173-446-040(2)(a)(iii)
[2] RCW 70A.65.170

aims to lay out the Cap-and-Invest Program's strategic next steps for carbon management policy development and implementation.

Path forward for carbon management in Cap-and-Invest

The Cap-and-Invest Program has initiated a multi-year process on carbon management. This effort is focused on policy development and implementation within the Climate Commitment Act. It is intended to complement the important programs and efforts led by other teams across Washington's state agencies, such as those led by Ecology's Clean Energy Coordination Team, the Department of Natural Resources, and the Department of Commerce.

Carbon management is a complex topic and strategic state- and federal-level coordination will be required for it to be leveraged to support Washington's climate goals. Needs and opportunities for carbon management policy development in Washington exist related to permitting and regulations, Tribal and community impacts and engagement, infrastructure, geophysical data, commercialization and deployment support, and other topics. These issue areas are discussed elsewhere, including in: Washington's Comprehensive Climate Action Plan, the Carbon Dioxide Removal Evaluation Study, a recent review on state geologic sequestration regulatory readiness, the TrapRock Report, and RMI's State CDR Atlas and state-level carbon dioxide removal resources.

The Cap-and-Invest Program's carbon management process is comprised of three initial phases, along with an ongoing workstream focused on offset protocol development (Figure 1). Each phase is discussed in more detail below.

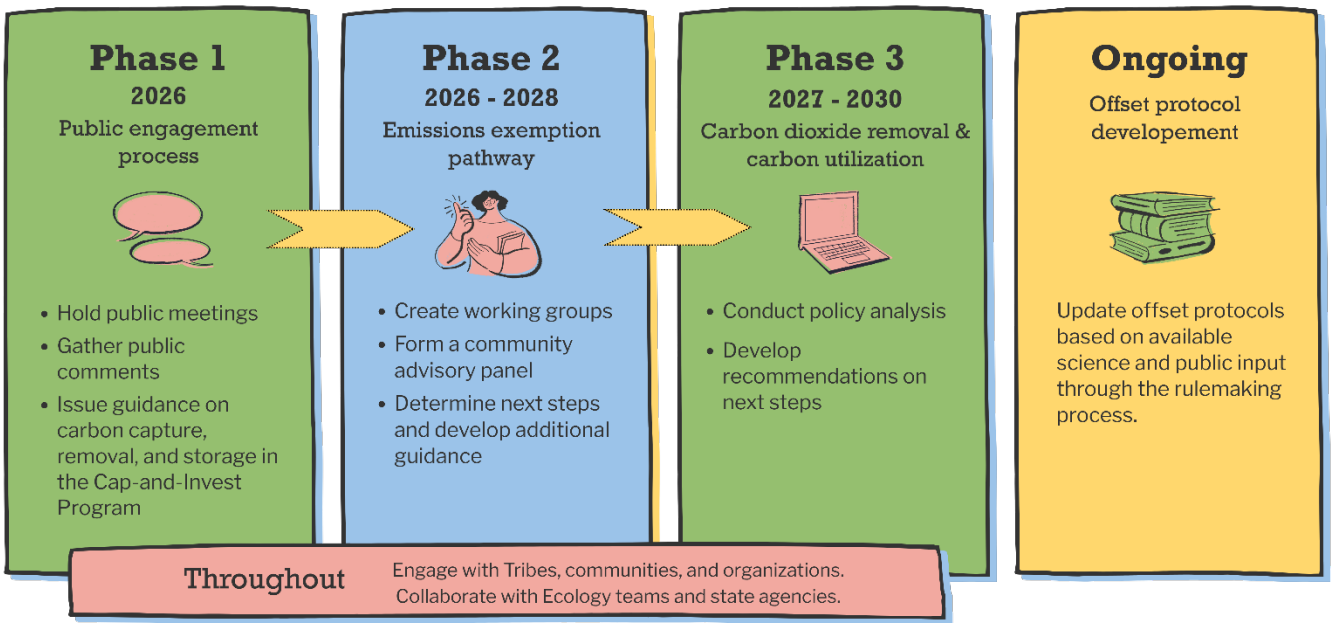

Figure 1: Timeline for carbon management under the Cap-and-Invest Program

Phase 1: Carbon management public engagement process (2026)

To inform the Cap-and-Invest Program's carbon management priorities and strategic direction, Ecology held a public engagement process throughout May and June 2026 (see summary of comments and individual comment letters).

In response to the need for additional clarity on how carbon management is treated in the Cap-and-Invest Program under current statute and rule, Ecology published Guidance: Carbon Management in the Cap-and-Invest Program.

Additionally, Ecology identified three high-level strategic questions that helped guide the development of this roadmap and the program's strategic focus areas:

- How will Ecology approach implementation of the permanent sequestration emission exemption pathway in Climate Commitment Act (CCA) Program Rule (WAC 173-446) and its definition of permanent sequestration in WAC 173-407-110?
- How should carbon dioxide removal, including the durability of removals be treated in the Cap-and-Invest Program? Should removals offering very long storage durations (e.g., >1,000 years) be treated as offsets or under a separate pathway?
- How should permanent and shorter-term utilization pathways be treated in the Cap-and-Invest Program?

Strategic Focus Areas

Permanent sequestration emission exemption pathway

The CCA Program Rule has an emissions exemption pathway for permanently sequestered carbon dioxide emissions (WAC 173-446-040(2)(a)). This is a critical compliance pathway for businesses with hard-to-abate emissions, when alternative decarbonization approaches are not available. Ecology must provide clarity on this provision, including on how sequestered carbon dioxide emissions can qualify as being permanently sequestered according to WAC 173-407-110.

Carbon dioxide removal (CDR)

Carbon dioxide removal is defined under the CCA (RCW 70A.65.010) as deliberate human activities that remove carbon dioxide from the atmosphere and durably store it in geological, terrestrial, or ocean reservoirs, or in products. Carbon dioxide removal, and greenhouse gas removals more broadly, are rapidly evolving subject areas that may require ongoing policy development within the Cap-and-Invest Program.

Carbon capture and utilization (CCU)

Carbon capture and utilization can be leveraged as a strategy to substitute fossil-based carbon in products such as building materials, plastics, chemicals, and fuels. It also has the potential to serve as an economical pathway for piloting carbon capture technologies, including those that can be used in conjunction with permanent geologic storage and/or mineralization. Close

examination is required to understand how this carbon management pathway fits within the Cap-and-Invest Program.

Phase 2: Permanent sequestration emissions exemption (2026-2028)

There are several outstanding policy questions related to the implementation of the emissions exemption pathway for permanently sequestered carbon dioxide emissions (WAC 173-446-040(2)(a)). These include technology eligibility, implementation of Ecology's 1,000-year permanent sequestration standard, and emissions accounting needs and linkage considerations for integration into the Cap-and-Invest Program. There is also a need to better understand where additional state-level coordination may be necessary to support further policy development for the Cap-and-Invest Program's emissions exemption pathway.

Ecology is focusing on the permanent sequestration emissions exemption pathway in Phase 2 because policy development in this area will help lay the foundation for multiple forms of carbon management. In addition to its direct relevance to captured and permanently stored point source emissions, developed policy on permanent sequestration can be leveraged in carbon dioxide removal and carbon dioxide utilization applications. For example, geologic sequestration is used in certain forms of durable carbon dioxide removal. Long-lived mineralization can include using and permanently storing carbon dioxide in products. By advancing its thinking and policy surrounding permanent sequestration first, Ecology will be better equipped to address other important, innovative, and emerging aspects of carbon dioxide removal and carbon utilization policy design in Phase 3.

Strategic actions

- **Hold technical working groups** on permanent sequestration (as defined in WAC 173-407-110) and emissions accounting considerations surrounding integration of carbon capture and permanent sequestration into an emissions trading system.
- **Create a community advisory panel** to discuss potential community impacts to decisions being made or discussed in the technical working groups.
- **Engage with Tribes, communities, and environmental groups** to seek input as Ecology further explores policy questions surrounding the implementation of the sequestered carbon dioxide emissions exemption provision in WAC 173-446-040.
- **Collaborate across Ecology and other state agencies** to identify policy questions, barriers, and opportunities that may need to be collectively explored to inform and support guidance development for the Cap-and-Invest Program's emissions exemption pathway.
- **Determine next steps and develop additional guidance** on the implementation of Ecology's permanent sequestration rule and emissions exemption pathway. This may include providing further clarity on geologic sequestration and carbon mineralization as pathways for Cap-and-Invest Program compliance. It may also include identifying areas

where additional state coordination, rulemaking, and public engagement are needed to enable further Cap-and-Invest Program carbon management-related policy development.

Phase 3: Carbon dioxide removal and carbon capture and utilization (2027-2030)

Carbon dioxide removal (CDR)

Ecology has existing protocols for carbon dioxide removal under its Cap-and-Invest Offset Program and regularly reviews these protocols, as is discussed further in the Offset Protocol Development section below. Ecology's efforts in Phase 2 will also support future protocol development for certain carbon dioxide removal approaches, including those that leverage geologic sequestration.

The evolution of carbon dioxide removal and greenhouse gas removal technologies has continued to introduce new considerations and emerging ideas that may be relevant to Washington's Cap-and-Invest Program. For example, Ecology may need to further explore how the durability of removals is addressed in the program, such as:

- Through consideration of performance-based approaches and frameworks, such as contracted durability.[3]
- Whether removals offering very long storage durations (e.g. >1,000 years) should be treated differently than removals offering shorter storage durations.

As a preliminary step in our exploration, Ecology published the Carbon Dioxide Removal Evaluation Study in 2025 to assess a variety of carbon dioxide removal approaches that may be viable in Washington. This study also identified existing accounting methods, discussed removal durability, and provided recommendations on how carbon dioxide removal may be further integrated into Washington's climate policy framework.

Ecology will continue to consider policy questions surrounding carbon dioxide removal in the Cap-and-Invest Program during Phase 3.

Carbon capture and utilization (CCU)

Carbon capture and utilization was identified during Phase 1 as a carbon management pathway that requires more clarity surrounding its treatment in the Cap-and-Invest Program and Washington's overall climate policy landscape. There remain open questions – what utilization approaches qualify as permanent versus non-permanent utilization; how these pathways might be integrated into and/or incentivized by the state's climate policies; what trade-offs exist for

[3] Contracted durability mechanisms are a set of legal and financial tools, such as buffer pools and permanence trusts, that ensure carbon removal over a specified time period. It refers to the length of time that a ton of carbon dioxide represented by a carbon credit is contractually guaranteed to remain out of the atmosphere. These concepts are discussed more in RMI. 2026. Contracted Durability: A Framework for Performance-Based Carbon Removal. https://rmi.org/resources/contracted-durability-a-framework-for-performance-based-carbon-removal/.

different emissions accounting approaches when considering carbon utilization in the context of an emissions trading system – are a few examples. The discussion in Phase 3 will consider these questions, building-on Phase 2 discussions on permanent sequestration, including permanent storage of carbon dioxide in products.

Strategic actions

- **Conduct policy analysis** surrounding carbon dioxide removal and carbon capture and utilization in the Cap-and-Invest Program. For each of the two pathways, policy analysis may include: examining statute and rule; analyzing of how these pathways are treated in other jurisdictions' climate policies; modeling to explore potential market impacts of different policies; hosting technical working groups to facilitate expert-level discussions.
- **Engage with Tribes, communities, and environmental groups** to seek input as Ecology further explores policy questions regarding carbon dioxide removal and carbon capture and utilization in the Cap-and-Invest Program.
- **Collaborate across Ecology and other state agencies** to explore how Washington's climate policy landscape can best support carbon dioxide removal and carbon capture and utilization and whether there are policy questions that may need to be collectively considered as the Cap-and-Invest Program seeks to create an implementation pathway for these topics.
- **Develop recommendations** on next steps for carbon dioxide removal and carbon capture and utilization policy development in the Cap-and-Invest Program.

Ongoing: Offset Protocol Development

Ecology regularly reviews and updates offset protocols based on the best available science and public input through the rulemaking process. Up-to-date information on current protocol revisions and development opportunities are on the Cap-and-Invest Offset Program webpage. Ecology is considering the feasibility of a Blue Carbon Offset Protocol, which includes carbon dioxide stored in aquatic ecosystems, such as seagrass beds, wetlands, and coastal and riparian forests.

The offsets pathway is inclusive of all types of carbon dioxide removal projects that meet the eligibility criteria. As Ecology continues to explore future offset protocols, there will be additional opportunities to leverage carbon dioxide removal within the Cap-and-Invest Program.

Contact

Email the **Cap-and-Invest carbon management team** at CCA_carboncapture@ecy.wa.gov with questions about the emissions exemption compliance pathway and general inquires related to carbon capture, utilization, removal, and storage.

Email the **Cap-and-Invest Offsets Program team** at CCAOffsets@ecy.wa.gov with questions related to the offsets compliance pathway and offset protocols.